

# (12) UK Patent Application (19) GB (11) 2 338 177 (13) A

(43) Date of A Publication 15.12.1999

(21) Application No 9919202.3

(22) Date of Filing 13.08.1999

(30) Priority Data

(31) 987321

(32) 14.08.1998

(33) ZA

(51) INT CL<sup>6</sup>

A45C 13/36 5/02 // A45C 13/26

(52) UK CL (Edition Q)

A4G G5B G5F1 G5F2 G5J G5T1

(56) Documents Cited

GB 2248384 A GB 2201335 A GB 1288078 A  
US 5575361 A US 4610334 A US 4123839 A

(58) Field of Search

UK CL (Edition Q) A4G  
INT CL<sup>6</sup> A45C 5/02 13/04 13/26 13/36  
ONLINE:WPI,EPODOC,JAPIO

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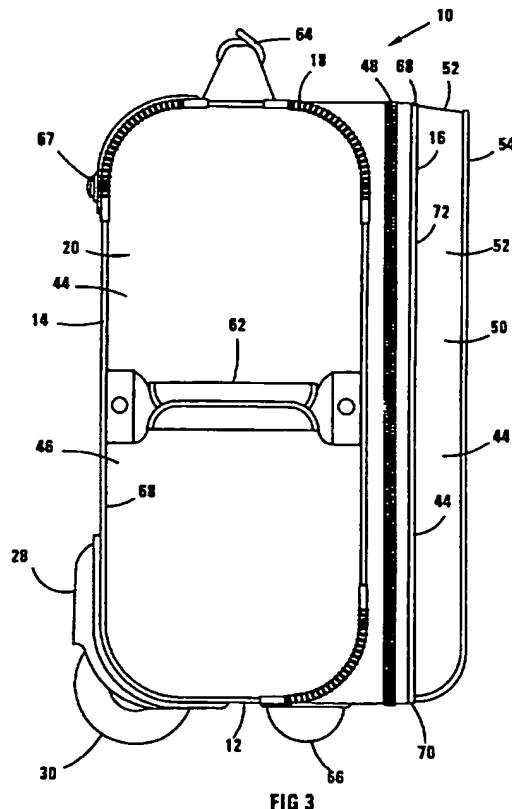
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(54) Abstract Title

Luggage article

(57) An article of luggage 10 comprises a plurality of flexible panels at least one of which has a circumferentially extending stiffening element 68 of wire-like material. As described the luggage is a wheeled suitcase having a retractable handle and the wheels 30 and handle are mounted on a stiffening panel or panels of expanded foamed plastics extending over three sides of the case. The stiffening loops may be provided in one wall of the suitcase, or in the front and two adjacent sides, or in opposite sides only, or in all walls. The wire-like material may be fabric-covered and provide piping stitched into the seams between adjacent case walls. Carrying handles 62, 64 and feet 66, 67 may also be provided.



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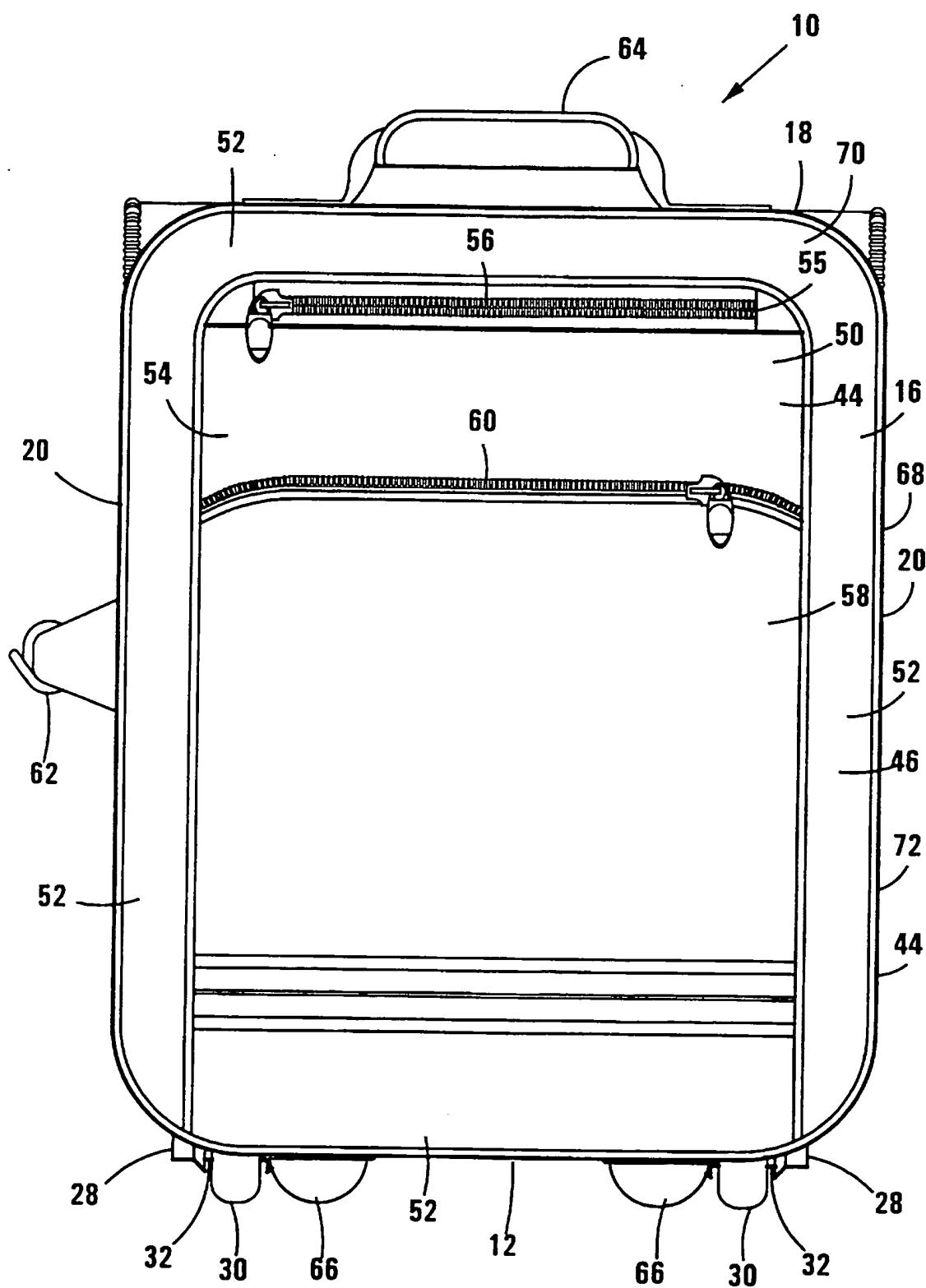


FIG 1

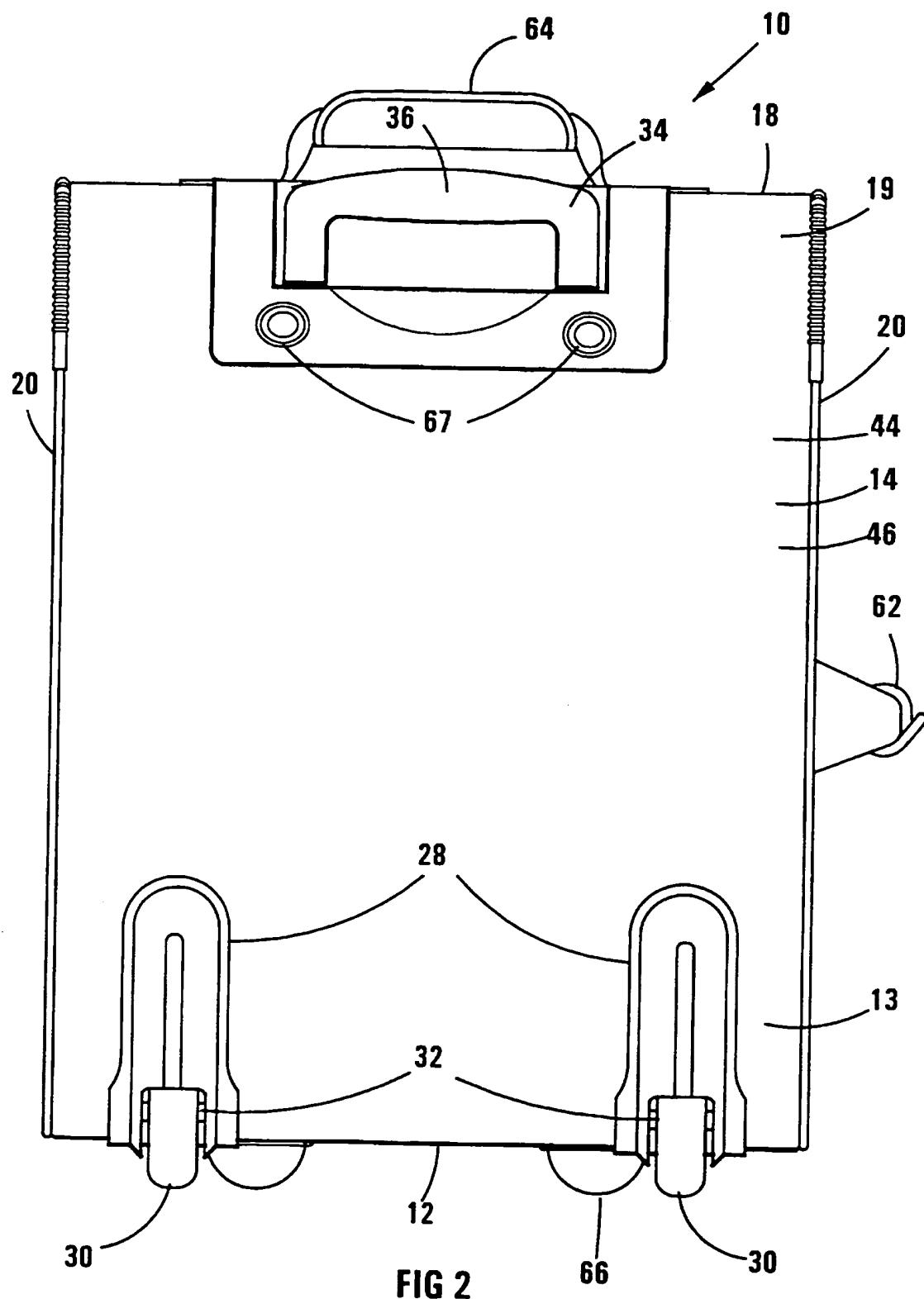


FIG 2

315

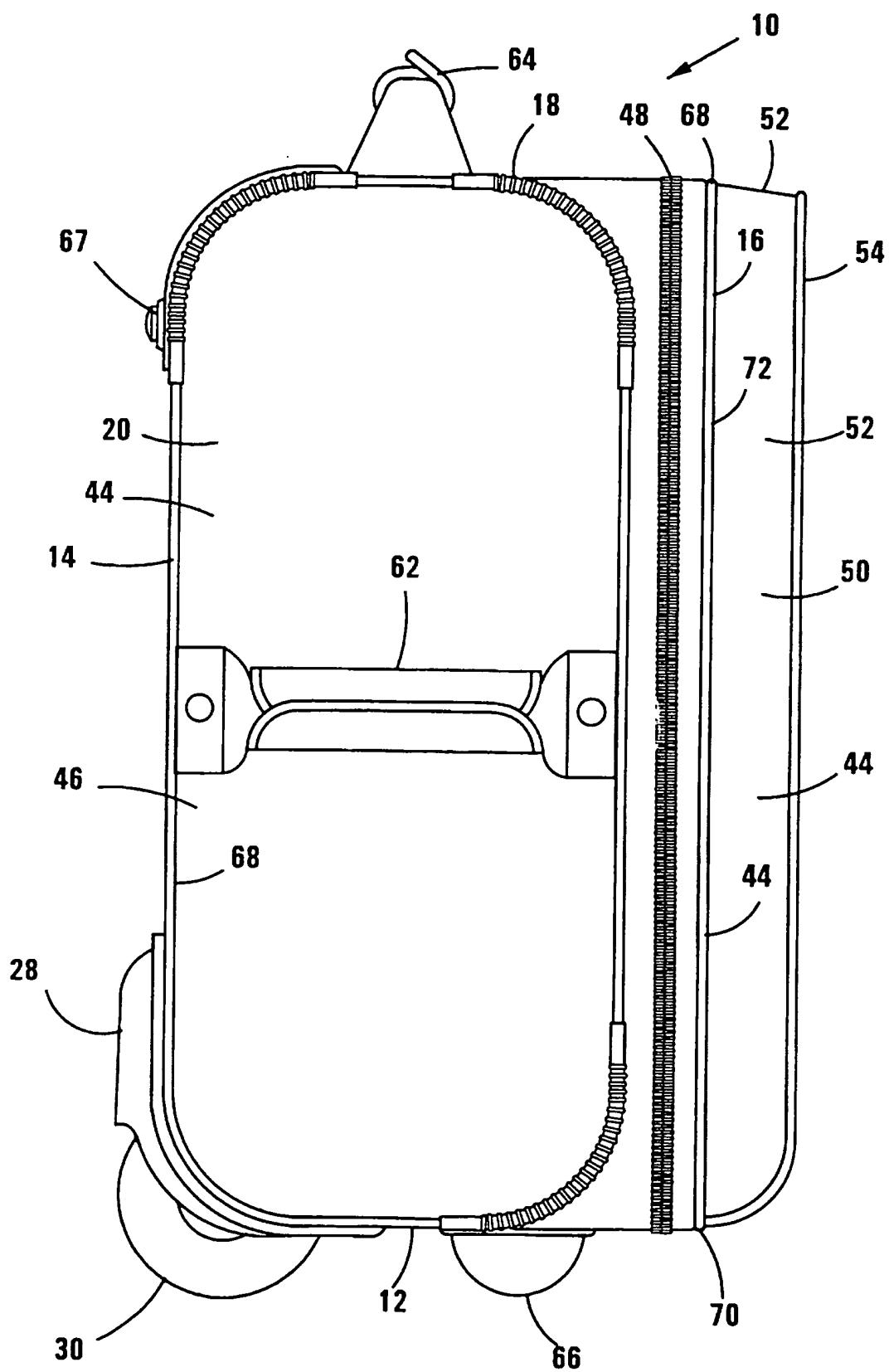
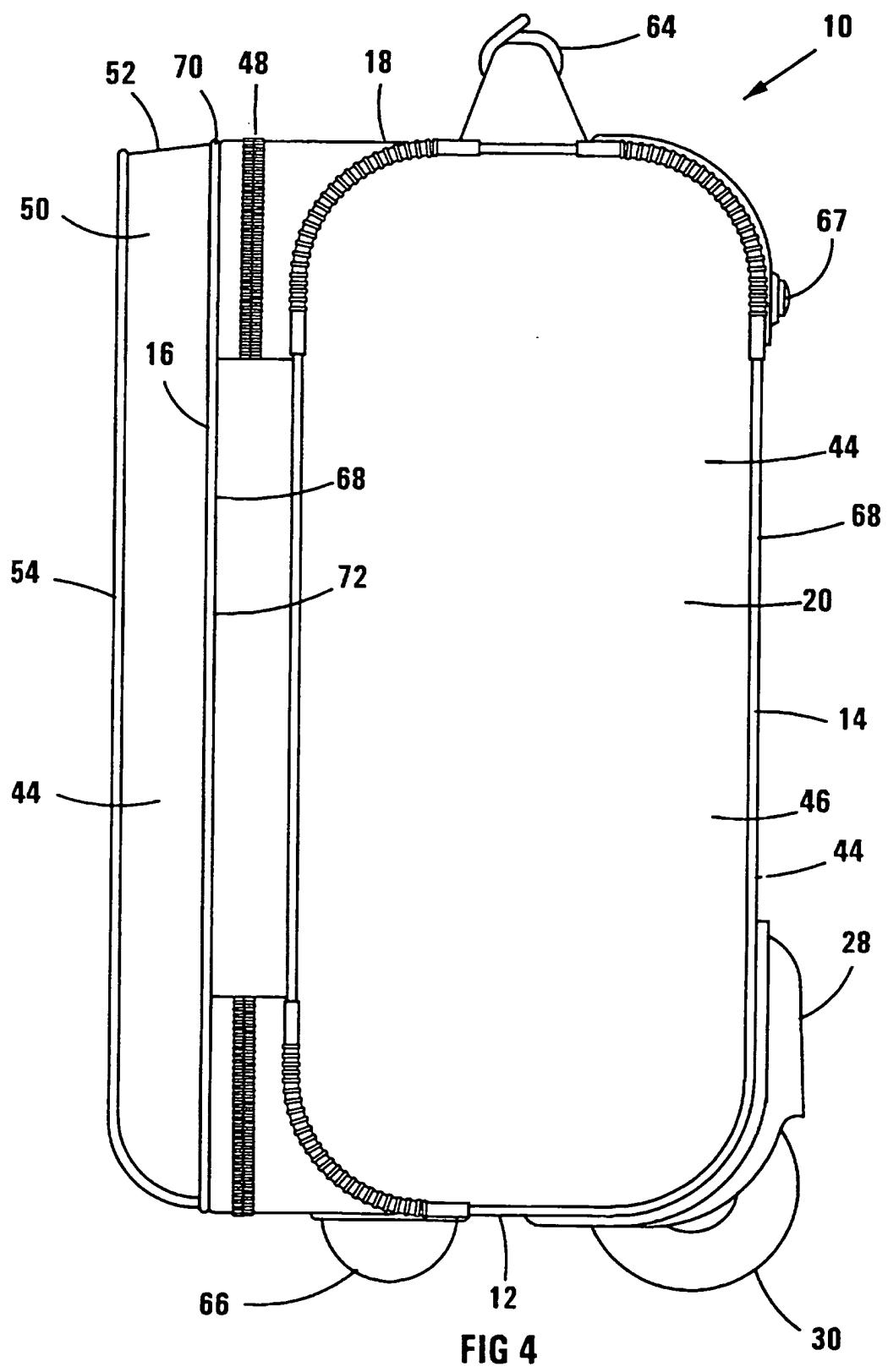


FIG 3



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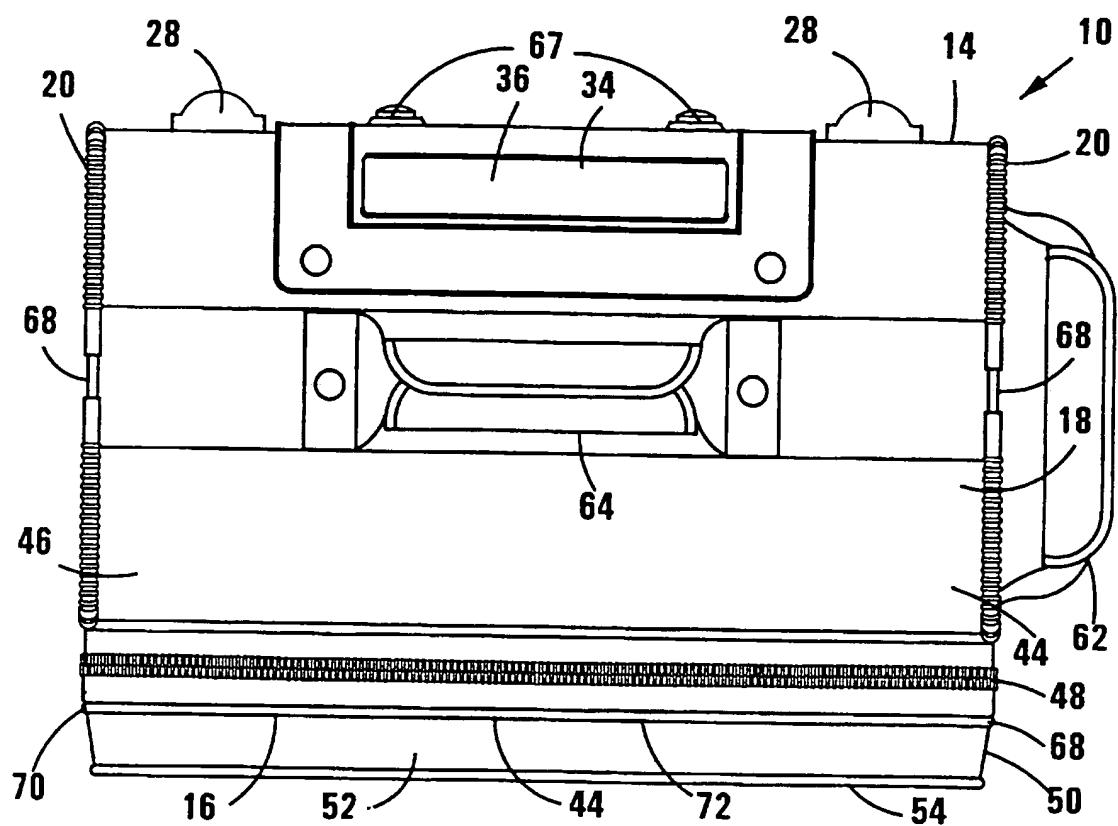


FIG 5

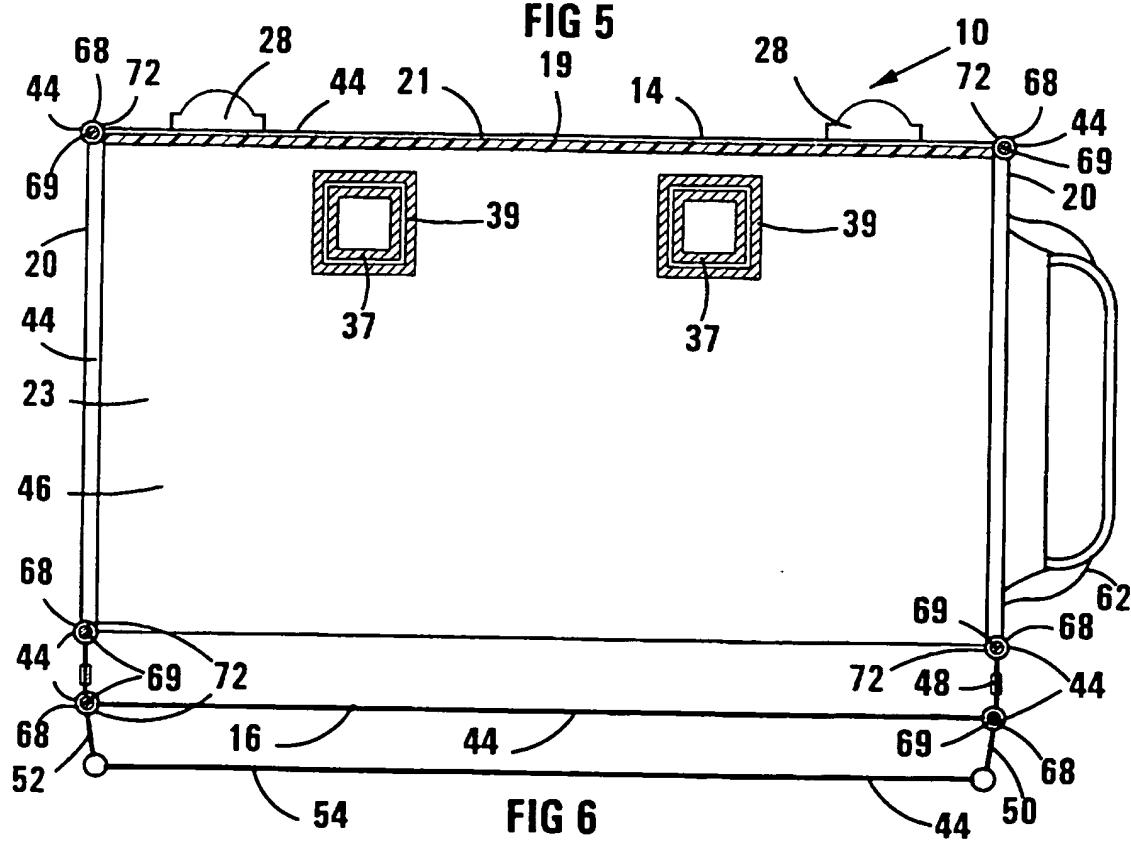


FIG 6

THIS INVENTION relates to an article of luggage.

More particularly, the invention relates to luggage known in the art as upright, roll-on cases. Such cases are substantially parallelepipedal, having six generally 5 rectangular walls, with a pair of wheels located at the junction between two walls and a handle (which is usually extendable) being provided at the opposite end of one of these walls. The wall which extends between the wheels and this handle will be referred to as the back wall with a wall that is parallel to and spaced therefrom being referred to as the front wall. The wall which extends between the 10 wheels and the front wall will then be a bottom wall with the wall that is parallel thereto and which extends between the front and back walls on the opposite end being the top wall. The remaining walls are then side walls. It will be appreciated that the disposition of the walls has been defined with the case oriented such that the wheels are in contact with the ground and the handle used to pull the case is 15 above. In this specification an article of luggage as described above will be referred to as "an article of luggage of the type described".

According to the invention there is provided an article of luggage which is substantially frameless and has walls of a fabric material and includes a 20 first stiffening loop of a resiliently flexible wire-like material arranged peripherally on a first wall thereof.

The article of luggage may include a pair of second stiffening loops each of which is arranged peripherally on a respective one of a pair of opposed second walls of the article, the first wall being intermediate the second walls. In a preferred embodiment of the invention where the article of luggage is of the type 5 described, the first wall is a front wall and the pair of opposed second walls are side walls.

In a further embodiment of the invention, the article of luggage may include a pair of stiffening loops each of which is arranged peripherally on a 10 respective side wall of the article. Instead, the article of luggage may have a plurality of such stiffening loops, each of which is arranged upon a respective wall of the article to stiffen the said wall.

Each stiffening loop of resiliently flexible wire-like material may 15 comprise a core of a piping, the piping being stitched into a seam between the wall on which the loop is arranged and adjacent walls of the article. Where the article of luggage has an openable front wall, the piping may be stitched into a seam between the front wall and a zip fastener arranged peripherally about the front wall. The loop may be covered with a fabric material which may be of the same 20 material as that of the walls of the article of luggage.

At least one of the walls may have arranged thereon a stiffening sheet of a lightweight resiliently flexible plastics material. A single sheet of rigid material

may be used, the sheet having three portions, a first portion stiffening the top wall, a second portion stiffening the bottom wall and an intermediate portion stiffening the back wall. This sheet may be of a synthetic plastics material. This sheet may be bent to define the three portions. The sheet may also have moulded recesses

5 in which the wheels are supported with suitable axles. In a preferred embodiment of the invention, the article of luggage has an extendable "U"-shaped handle, having a cross bar with two arms extending therefrom. Two support tubes may then be secured to the portion of the rigid sheet stiffening the back wall, with the two arms being slidable therein between extended and retracted positions.

10 Instead, a first sheet, bent to define two substantially perpendicular portions, may stiffen the top wall and an operatively top portion of the back wall, while a second sheet, similarly bent to define two substantially perpendicular portions, may stiffen the bottom wall and an operatively bottom portion of the back wall. Then the handle may be mounted on the first sheet, while the wheels may be mounted on

15 the second sheet.

Further, some of the walls may be further stiffened by means of a non-rigid sheet of a stiffening material such as an expanded plastics material, for example an open or closed cell foam plastic. The non-rigid sheet of stiffening material may be encased in cloth which may be of a high density polyester with an acrylic coating. Such cloth is lightweight and durable. This cloth may also be used to cover the rigid sheet, or sheets, used for the top, bottom and back walls, the cloth of the various walls being sewn to each other. The tubes for the extendable handle may be covered with a lining of the cloth.

The article of luggage may have a central compartment which is defined by the bottom, back, front, top and side walls. Conveniently, the front wall may be openable, and may be secured to the top, bottom and one of the side walls by means of a sliding fastener, such that the front wall is hingedly connected to the other side wall.

Auxiliary pouches may also be provided on the outside of the front wall, which may also be closed by sliding fasteners.

Further, the article may have a first carrying handle attached to one of the side walls. Preferably, the first carrying handle may be attached to the side wall opposite to the side wall to which the front wall is hingedly attached. A second carrying handle may be attached to the top wall.

Feet may be provided on the bottom wall opposite the wheels.

The invention is now described, by way of example, with reference to the accompanying drawings.

In the drawings,

Figure 1 shows a front view of an article of luggage in accordance with the invention;

Figure 2 shows a rear view of the article of luggage;

Figure 3 shows a first side view of the article of luggage;

Figure 4 shows a second opposed side view of the article of luggage;

Figure 5 shows a top view of the article of luggage; and

Figure 6 shows a sectional top view of the article of luggage.

5 In the drawings, reference numeral 10 generally indicates an article  
of luggage in accordance with the invention.

10 The article of luggage 10 is of the type described, being of the upright  
roll-on type, and has a bottom wall 12, a top wall 18, a back wall 14, a front wall  
16 and a pair of side walls 20.

15 The bottom wall 12, top wall 18 and back wall 14 have arranged  
thereon a stiffening sheet 19 (as shown in Figure 6) of a resiliently flexible plastics  
material which is bent to define a pair of end portions and an intermediate portion  
21, the end portions being substantially perpendicular to the intermediate portion  
21. Moulded recess defining elements 28 define recesses in the sheet 19 of  
plastics material and are attached to the sheet 19 at a junction between the  
operatively bottom end portion 23 and the intermediate portion 21 of the stiffening  
sheet 19. Wheels 30 are supported with axles 32 in each of the recesses 28. An  
20 extendable handle 34 which is "U"-shaped, having a cross bar 36 with two arms  
37 (as shown in Figure 6) extending therefrom is secured to the intermediate  
portion 21 of the stiffening sheet 19 of rigid plastics material by means of a pair  
of guide tubes 39 in which the arms 37 are slidably received.

The article of luggage 10 has a central compartment 46 which is defined by the bottom wall 12, back wall 14, front wall 16, top wall 18 and side walls 20. The front wall 16 is openable, and is secured to the top wall 18, bottom wall 12 and one of the side walls 20 by means of a zip 48, such that the front wall 5 16 is hingedly connected to the other side wall 20. A cloth lining (not shown) covers the interior of the central compartment 46, covering the sheets 19 of plastics material and the arms 37 and guide tubes 39 for the extendable handle 34.

The article of luggage 10 has a front pocket 50 attached to, and 10 projecting from, the front wall 16. The front pocket 50 is defined by fabric 44, which is the same as that used for the walls 12, 14, 16, 18 and 20. The pocket 50 has a gusset 52 and a front cover 54, the gusset 52 extending from the front wall 16. An opening 55 defined in the front cover 54 is openably closeable by means of a zip 56 to permit access to the front pocket 50.

15

An auxiliary pouch 58 is provided on the outside of the front cover 54 and is closed by a zip 60. Further auxiliary pouches (not shown) and tie-down straps (not shown) are provided within the central compartment 46.

20

Further, the article of luggage 10 has a first carrying handle 62 attached to the side wall 20 opposite to the side wall 20 to which the front wall 16 is hingedly attached. A second carrying handle 64 is attached to the top wall 18.

Feet 66 are provided on the bottom wall 12 opposite the wheels 30. A further pair of feet 67 is provided on the back wall 14 opposite the wheels 30.

A stiffening element 68 comprising an endless loop 69 of a spring 5 steel is shaped and configured to correspond with the shape and configuration of a periphery 70 of the front wall 16, the stiffening element 68 providing stiffening for the wall 16. The loop 69 comprises a core of a piping 72, the spring steel loop 69 being covered with fabric 44 (as shown in Figure 6). The piping 72 is stitched into a seam between the front wall 16 and the zip 48. Two further stiffening 10 elements 68 comprising loops 69 included in piping 72 provide stiffening for the side walls 20 of the article 10. The piping 72 of each of the further loops 69 is stitched into a seam between the respective side wall 20 and adjacent top, bottom, front and back walls 18, 12, 16 and 14, respectively.

CLAIMS

1. An article of luggage which is substantially frameless and has walls of a fabric material and includes a first stiffening loop of a resiliently flexible wire-like material arranged peripherally on a first wall thereof.
- 5
2. The article of luggage as claimed in Claim 1, which includes a pair of second stiffening loops each of which is arranged peripherally on a respective one of a pair of opposed second walls of the article, the first wall being intermediate the second walls.
- 10
3. The article of luggage as claimed in Claim 2, in which each stiffening loop of resiliently flexible wire-like material comprises a core of a piping, the piping being stitched into a seam between the wall on which the stiffening loop is arranged and adjacent walls of the article.
- 15
4. The article of luggage as claimed in Claim 3, in which at least one of the walls has arranged thereon a stiffening sheet of a lightweight resiliently flexible plastics material.
- 20

5. An article of luggage comprising a number of flexible panels joined to form a container and provided with a closeable access opening to provide access to the interior of the container, at least one of the panels  
5 having a circumferentially-extending stiffening element formed from wire-like material.

6. A wheeled suitcase comprising a back panel having a pair of wheels arranged adjacent one edge thereof and an extendable handle mounted to the edge opposite the wheels, a bottom wall extending from the edge adjacent the wheels and a top wall extending from the edge adjacent the handle, a pair of side walls extending between the top and bottom walls, and a front wall  
10 substantially parallel to the back wall and extending between the side walls and the top and bottom walls, at least one of the top, bottom, front, back and side walls being formed of a flexible material and including a circumferentially-extending stiffening element formed  
15 from wire-like material.

20

7. A wheeled suitcase according to claim 6, wherein the top wall, back wall, and bottom wall are substantially less flexible than the side walls and front wall.

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8. A wheeled suitcase according to claim 7, where in the top wall, back wall, and bottom wall are reinforced by a stiffening sheet.

9. An article of luggage substantially as herein described with reference to figures 1 to 6 of the accompanying drawings.



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Application No: GB 9919202.3  
Claims searched: All

Examiner: Geoff Nicholls  
Date of search: 2 November 1999

**Patents Act 1977**  
**Search Report under Section 17**

**Databases searched:**

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.Q): A4G

Int Cl (Ed.6): A45C 5/02 13/04 13/26 13/36

Other: ONLINE: WPI, EPODOC, JAPIO

**Documents considered to be relevant:**

Category	Identity of document and relevant passage	Relevant to claims
X	GB 2248384 A (PAKLITE) Whole document relevant	1, 5
X	GB 2201335 A (SPARTAN) Whole document relevant	1, 3, 5
X	GB 1288078 (GILCHRIST & FISHER) Whole document relevant	1, 3, 5
X	US 5575361 (CHOU) See especially Fig 4(A)	1, 5, 6
X	US 4610334 (PELAVIN) Whole document relevant	1, 5
X	US 4123839 (WEINER) Whole document relevant	1, 3, 5

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
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&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.